

Claims

- [c1] A method of controlling an automotive vehicle having a controllable suspension component comprising:
applying brake-steer to at least one wheel;
generating a suspension control signal in response to the brake-steer signal; and
articulating at least one wheel coupled to the suspension to enhance brake-steer of the vehicle in response to the controllable suspension component.
- [c2] A method as recited in claim 1 wherein applying brake-steer comprises applying at least one brake at a first wheel to reduce a vehicle turning radius.
- [c3] A method as recited in claim 1 wherein applying brake-steer comprises applying an increased drive torque to a second wheel relative to a first wheel.
- [c4] A method as recited in claim 1 applying brake-steer comprises increasing the normal load on a rear wheel.
- [c5] A method as recited in claim 1 applying brake-steer comprises increasing the normal load on a front wheel.
- [c6] A method as recited in claim 1 further comprising de-

detecting a parking mode and generating the brake-steer signal in response to a parking mode.

- [c7] A method as recited in claim 6 wherein detecting a parking mode comprises detecting a parking mode in response to a vehicle speed.
- [c8] A method as recited in claim 6 wherein detecting a parking mode comprises detecting a parking mode in response to a steering wheel angle.
- [c9] A method as recited in claim 6 wherein detecting a parking mode comprises detecting a parking mode in response to a map correlating vehicle speed and a steering wheel rate to a parking/non-parking condition.
- [c10] A method as recited in claim 6 wherein detecting a parking mode comprises detecting a parking mode in response to a driver-actuated switch.
- [c11] A method as recited in claim 1 wherein articulating one wheel comprises articulating two wheels.
- [c12] A method as recited in claim 11 wherein the two wheels are coupled to a solid axle.
- [c13] A method as recited in claim 1 wherein articulating at least one wheel coupled to the suspension comprises articulating using a Hotchkiss suspension.

- [c14] A method as recited in claim 1 wherein articulating at least one wheel coupled to the suspension comprises articulating using an electrically controllable bushing.
- [c15] A method as recited in claim 1 wherein articulating at least one wheel coupled to the suspension comprises a solenoid actuated suspension component.
- [c16] A method as recited in claim 1 wherein articulating at least one wheel coupled to the suspension comprises a locking mechanism with a compliant rear suspension mount.
- [c17] A vehicle having a turning radius comprising:
a suspension comprising a controllable suspension component; and
a controller coupled to the controllable component, said controller programmed to determine a brake-steer condition and generate a suspension control signal in response to the brake-steer condition,
said controllable suspension component reducing the turning radius of the vehicle in response to the suspension control signal.
- [c18] A vehicle as recited in claim 17 wherein said controller is programmed to determine a brake-steer condition in response to a parking mode.

- [c19] A vehicle as recited in claim 17 wherein said controller determines a parking mode in response to a vehicle speed.
- [c20] A vehicle as recited in claim 17 wherein said controller determines a parking mode in response a steering wheel angle.
- [c21] A vehicle as recited in claim 17 wherein said controller determines a parking mode in response to a vehicle speed and a steering angle.
- [c22] A vehicle as recited in claim 17 wherein said controller determines a parking mode in response to a driver-actuated switch.
- [c23] A vehicle as recited in claim 17 wherein said controller in said parking mode controls a first positive torque to a first driven wheel and simultaneously controls a second positive torque greater than the first positive torque to a second wheel so that the turning radius of the vehicle is reduced.
- [c24] A vehicle as recited in claim 17 wherein said suspension comprises a Hotchkiss suspension.
- [c25] A vehicle as recited in claim 17 wherein said suspension component comprises an electrically controllable bush-

ing.

- [c26] A vehicle as recited in claim 17 wherein said suspension component comprises a toe link coupled to the electrically controllable bushing.
- [c27] A vehicle as recited in claim 17 wherein said suspension component comprises a solenoid actuated suspension component.
- [c28] A vehicle as recited in claim 17 wherein said suspension component comprises a locking mechanism with a compliant rear suspension mount.
- [c29] A vehicle as recited in claim 17 wherein said electrically controllable suspension component reducing the turning radius of the vehicle by articulating at least one wheel.
- [c30] A vehicle as recited in claim 17 wherein said electrically controllable suspension component reduces the turning radius of the vehicle by articulating at two wheels on an axle.